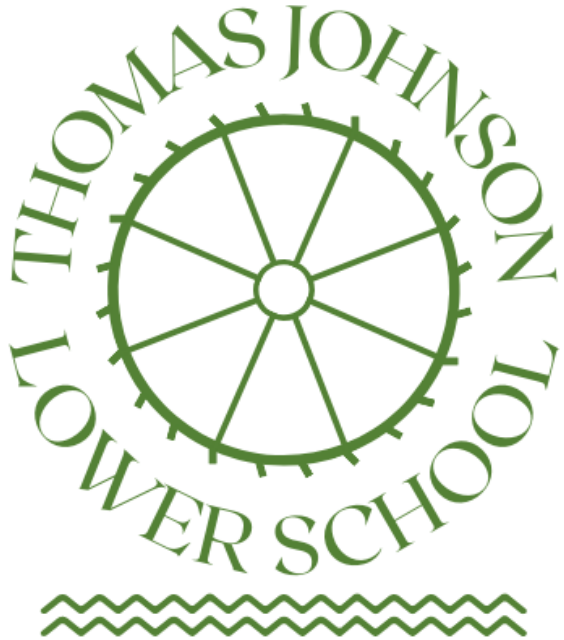

MATHS

PROGRESSION FRAMEWORK

EYFS		
ELG – Maths	**Number**	Children at the expected level of development will: • Have a deep understanding of number to 10, including the composition of each number. Subitise (recognise quantities without counting) up to 5 • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts
	Numerical Patterns	Children at the expected level of development will: • Verbally count beyond 20, recognising the pattern of the counting system • Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity • Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

Number and Place Value						
Year Group	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
NC Aims	• count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number • count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens • given a number, identify one more and one less • identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least • read and write numbers from 1 to 20 in numerals and words.	• count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward • recognise the place value of each digit in a two-digit number (tens, ones) • identify, represent and estimate numbers using different representations, including the number line • compare and order numbers from 0 up to 100; use and = signs • read and write numbers to at least 100 in numerals and in words • use place value and number facts to solve problems	• count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number • recognise the place value of each digit in a three-digit number (hundreds, tens, ones) • compare and order numbers up to 1000 • identify, represent and estimate numbers using different representations • read and write numbers up to 1000 in numerals and in words • solve number problems and practical problems involving these ideas	• count in multiples of 6, 7, 9, 25 and 1000 • find 1000 more or less than a given number • count backwards through zero to include negative numbers • recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) • order and compare numbers beyond 1000 • identify, represent and estimate numbers using different representations • round any number to the nearest 10, 100 or 1000 • solve number and practical problems that involve all of the above and with increasingly large positive numbers • read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.	• read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit • count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 • interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero • round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 • solve number problems and practical problems that involve all of the above • read Roman numerals to 1000 (M) and recognise years written in Roman numerals	• read, write, order and compare numbers up to 10 000 000 and determine the value of each digit • round any whole number to a required degree of accuracy • use negative numbers in context, and calculate intervals across zero • solve number and practical problems that involve all of the above.
Coverage	• Counting to 10 • Counting objects to 10 • Writing to 10 • Counting to zero • Comparing numbers of objects • Ordering numbers • Comparing numbers • Counting to 20 • Writing to 20 • Comparing numbers • Ordering numbers • Number patterns • Counting to 40 • Writing numbers to 40	• Counting to 100 • Place value • Comparing numbers • Number bonds • Number patterns	• Counting in hundreds • Counting in hundreds, tens and ones • Place value • Comparing and ordering numbers • Counting in fifties • Number patterns • Counting in fours and eights	• Counting in hundreds and twenty-fives • Counting in thousands • Counting in thousands, hundreds, tens and ones • Using place value • Comparing and ordering numbers • Making number patterns • Counting in sixes, sevens and nines • Rounding numbers • Rounding numbers to estimate • Writing roman numerals for 1	• Reading and writing numbers to 100,000 • Reading and writing numbers to 1,000,000 • Comparing numbers to 1,000,000 • Making number patterns • Rounding numbers • Writing roman numerals to 1000 • Writing years in roman numerals	• Reading and writing numbers to 10 million • Comparing numbers to 10 million • Comparing and ordering numbers to 10 million • Rounding numbers • Adding and subtracting negative numbers • Using negative numbers

	• Counting in Tens and Ones • Comparing numbers • Finding how much more • Making number patterns • Counting to 100 • Finding Tens and Ones • Comparing numbers • Making number patterns			to 20 • Writing roman numerals to 100		
Knowledge	• Equal means the same in amount, size or number. • More than means greater in amount or size. • Less than means smaller in amount or size. • Most means the biggest number or amount of something. • Least means the smallest number or amount of something.	• Place value refers to the amount a digit is worth due to its position in a number. • Estimate means to have a sensible guess. • Estimating is calculating the approximate amount, size or value of something. • Less than (<) shows that the value to the left of it is lower than the value to the right of it. • Greater than (>) shows that the value to the left of it is higher than the value to the right of it. • Equals (=) shows that the number on each side of it has or should have the same value.	• A digit is any number from 0-9. • In place value, each place is 10 times the value of the place to its right.	• A positive number is greater than zero. • A negative number is less than zero. • For two or more digits, if the number to the right of the place value number you are rounding is equal to or greater than 5, round up. • If the number to the right of the place value number you are rounding is less than 5, round down. • Estimate means to quickly find, with some thought of the calculation, an approximate value close to the right value. • Inverse operations are opposites that reverse the effect of the other operation. • In Roman numerals I=1, V=5, X=10, L=50 and C=100. All numbers between 1 and 100 can be written using a combination of these. • If a lower value numeral is placed after a higher value numeral, it indicates they should be added together. • If a lower value is placed before a higher value numeral, it should be subtracted from the higher value.	• Temperatures can be measured in Celcius. $0^{o}C$ is the freezing point of water and $100^{o}C$ is the boiling point of water. • For two or more digits, if the number to the right of the place value number you are rounding is equal to or greater than 5, round up. • If the number to the right of the place value number you are rounding is less than 5, round down. • In Roman numerals I=1, V=5, X=10, L=50, C=100, D=500 and M=1000. All numbers between 1 and 100 can be written using a combination of these. • If a lower value numeral is placed after a higher value numeral, it indicates they should be added together. • If a lower value is placed before a higher value numeral, it should be subtracted from the higher value. • Years are sometimes written in Roman numerals, for example 2020 is MMXX.	• In place value, each place is 10 times the value of the place to its right. • For two or more digits, if the number to the right of the place value number you are rounding is equal to or greater than 5, round up. • If the number to the right of the place value number you are rounding is less than 5, round down. • Positive integers are whole numbers greater than zero. • Negative integers are whole numbers less than zero.

Addition and Subtraction						
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
NC Aims	• read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs • represent and use number bonds and related subtraction facts within 20 • add and subtract one-digit and two-digit numbers to 20, including zero • solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = – 9.	• solve problems with addition and subtraction: - using concrete objects and pictorial representations, including those involving numbers, quantities and measures - applying their increasing knowledge of mental and written methods • recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • add and subtract numbers using concrete objects, pictorial representations, and mentally, including: - a two-digit number and ones - a two-digit number and tens - two two-digit numbers - adding three one-digit numbers • show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot • recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	• add and subtract numbers mentally, including: - a three-digit number and ones - a three-digit number and tens - a three-digit number and hundreds • add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction • estimate the answer to a calculation and use inverse operations to check answers • solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction	• add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate • estimate and use inverse operations to check answers to a calculation • solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.	• add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) • add and subtract numbers mentally with increasingly large numbers • use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy • solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	•

Coverage	• making number bonds • making number stories • add by using number bonds • add by counting on • completing number sentences • making addition stories • solving picture problems • subtract by crossing out • subtract by using number bonds • subtract by counting back • making subtraction stories • solving picture problems • addition and subtraction • add by counting on • add by making 10 • add by adding ones • subtract by counting back • subtract by subtracting ones • subtract from 10 • addition and subtraction facts • solving word problems	• simple adding • adding with renaming • simple subtraction • subtracting with renaming • addition of three numbers • solving word problems	• addition and subtraction facts • simple addition • adding with renaming • simple subtracting • simple subtraction • subtracting with renaming • using models	• finding sums • adding without renaming • adding with renaming • adding using mental strategies • finding differences • subtracting without renaming • subtracting with renaming • subtracting using mental strategies • solving word problems	• Counting on to add • Counting backwards to subtract • Adding within 1,000,000 • Adding and subtracting within 1,000,000 • Adding within 1,000,000 • Subtracting within 1,000,000 • Adding and subtracting within 1,000,000 • Adding within 1,000,000 • Subtracting within 1,000,000	
Knowledge	• Addition (+) is putting two or more numbers or objects together to give a larger number (the total). • Subtraction (-) is removing or taking away numbers or objects. What is left is the difference between the two numbers. • The equals sign (=) shows that things on both sides of it have the same value. • A number bond is a pair of numbers that add up to a given number. • 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 are one-digit numbers • One-digit numbers are made up of one digit or number. • Two-digit numbers have two digits, such as 12 or 20.	• Numbers can be added in any order and the answer will be the same. • Numbers cannot be subtracted in any order to give the same answer.	• Estimate means to quickly find, with some thought of the calculation, an approximate value close to the right value. • Inverse operations are opposites that reverse the effect of the other operation. • Addition and subtraction are inverse operations.	• Estimate means to quickly find, with some thought of the calculation, an approximate value close to the right value. • Inverse operations are opposites that reverse the effect of the other operation.	• Estimate means to quickly find, with some thought of the calculation, an approximate value close to the right value.	•

Multiplication and Division						
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
NC Aims	• solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	• recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers • calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs • show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot • solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods ♣ solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.	• recall multiplication and division facts for multiplication tables up to 12 × 12 • use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers • recognise and use factor pairs and commutativity in mental calculations • multiply two-digit and three-digit numbers by a one-digit number using formal written layout • solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.	• identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers • know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers • establish whether a number up to 100 is prime and recall prime numbers up to 19 • multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers • multiply and divide numbers mentally drawing upon known facts • divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context • multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 Mathematics – key stages 1 and 2 33 Statutory requirements • recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) • solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes • solve problems involving addition, subtraction, multiplication and division	• multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication • divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context • divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context • perform mental calculations, including with mixed operations and large numbers • identify common factors, common multiples and prime numbers • use their knowledge of the order of operations to carry out calculations involving the four operations • solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why Mathematics – key stages 1 and 2 40 Statutory requirements • solve problems involving addition, subtraction, multiplication and division • Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.

					and a combination of these, including understanding the meaning of the equals sign • solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	
Fractions (including decimals and percentages)						
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
NC Aims	• recognise, find and name a half as one of two equal parts of an object, shape or quantity • recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.	• recognise, find, name and write fractions 1/3, ¼, 2/4 and ¾ of a length, shape, set of objects or quantity • write simple fractions for example, 2 1 of 6 = 3 and recognise the equivalence of 4 2 and 2 1 .	• count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 • recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators • recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators • recognise and show, using diagrams, equivalent fractions with small denominators • add and subtract fractions with the same denominator within one whole [for example, 5/7 + 1/7 = 6/7 • compare and order unit fractions, and fractions with the same denominators • solve problems that involve all of the above.	• recognise and show, using diagrams, families of common equivalent fractions • count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. • solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number • add and subtract fractions with the same denominator • recognise and write decimal equivalents of any number of tenths or hundredths • recognise and write decimal equivalents to 1/4 , 1/5 , 3/4 • find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths • round decimals with one decimal place to the nearest whole number • compare numbers with the same number of decimal places up to two decimal places • solve simple measure and money problems involving	• compare and order fractions whose denominators are all multiples of the same number • identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths • recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 2/5 + 4/5 = 6/5 = 1 1/5 • add and subtract fractions with the same denominator and denominators that are multiples of the same number • multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams • read and write decimal numbers as fractions (for example, 0.71 = 71/100) • recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • round decimals with two decimal places to the nearest whole number and to one decimal place • read, write, order and compare numbers with up	• use common factors to simplify fractions; use common multiples to express fractions in the same denomination • compare and order fractions, including fractions > 1 • add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions • multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, 1/4 × 1/2 = 1/8] • divide proper fractions by whole numbers [for example, 1/3 ÷ 2 = 1/6] • associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8] • identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places • multiply one-digit numbers with up to two decimal places by whole numbers • use written division methods in cases where the answer has up to two decimal places • solve problems which require

				fractions and decimals to two decimal places.	to three decimal places • solve problems involving number up to three decimal places • recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal • solve problems which require knowing percentage and decimal equivalents of ½, ¼, 1/5, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25	answers to be rounded to specified degrees of accuracy • recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.
Coverage	• making halves • making quarters • sharing and grouping	• making equal parts • showing half and quarter • showing quarters • showing thirds • naming fractions • making equal fractions • comparing and ordering fractions • counting wholes and parts • counting in halves • counting in quarters • counting in thirds • finding part of a set • finding part of a quantity	• counting in tenths • making number pairs • adding fractions • subtracting fractions • finding the simplest fraction • finding equivalent fractions • comparing fractions • adding fractions • subtracting fractions • finding part of a set • finding the fraction of a number • sharing one • sharing more than 1 • solving word problems	• counting in hundredths • writing mixed numbers • showing mixed numbers on a number line • finding equivalent fractions • simplifying mixed numbers • simplifying improper fractions • adding fractions • subtracting fractions • solving word problems • writing tenths • writing hundredths • writing decimals • comparing and ordering decimals • making number patterns • rounding decimals • writing fractions as decimals • dividing whole numbers by 100	• Dividing to make fractions • Writing improper fractions and mixed numbers • Finding equivalent fractions • Comparing and ordering fractions • Making number pairs • Adding fractions • Subtracting fractions • Multiplying fractions by whole numbers • Multiplying mixed numbers • Multiplying mixed numbers by whole numbers • Writing decimals • Reading and writing decimals • Comparing decimals • Writing fractions as decimals • Adding and subtracting decimals • Rounding decimals • Comparing quantity • Finding percentages	• Simplifying fractions • Comparing and ordering fractions • Adding and subtracting fractions • multiplying fractions • dividing a fraction by a whole number • writing and reading decimals • dividing whole numbers • writing fractions as decimals • multiplying decimals • dividing decimals • multiplying a decimal by a 2-digit whole number • dividing a decimal by a 2-digit whole number • finding the percentage of a number • finding percentage change • using percentage to compare
Knowledge	• A half is one of two equal parts of a whole object, shape or quantity. • A quarter is one of four equal parts of a whole	• A half is one of two equal parts of a whole object, shape or quantity. • A quarter is one of four equal parts of a whole	• A tenth is 1 divided by 10. • Unit fractions have a numerator of 1. • Non-unit fractions have a numerator greater than 1.	• A tenth is 1 divided by 10. • A hundredth is 1 divided by 100. • The numerator of a fraction is the top number and	• The numerator of a fraction is the top number and shows how many parts there are. • The denominator of a	• Fractions can be simplified by dividing the numerator and denominator by the same common factor. • Multiples are the result after

	object, shape or quantity.	object, shape or quantity. • A third is one of three equal parts of a whole object, shape or quantity. • Equivalence means of equal (the same) value. • Two quarters are equivalent to one half.	• The numerator of a fraction is the top number and shows how many parts there are. • The denominator of a fraction is the bottom number and shows into how many equal parts the item or number is divided. • Unit fractions have a numerator of 1. • Non-unit fractions have a numerator greater than 1. • Equivalence means of equal (the same) value.	shows how many parts there are. • The denominator of a fraction is the bottom number and shows into how many equal parts the item or number is divided. • A fraction where the numerator is greater than the denominator is an improper fraction and has a value greater than one. • A decimal number is a number with a decimal point in it that shows the whole number to the left of the point and tenths, hundredths and thousandths and so on to the right of it. • Fractions have decimal equivalents. • For two or more digit numbers, if the number to the right of the place value number you are rounding is equal to or greater than 5, round up. • If the number to the right of the place value number you are rounding is less than 5, round down. • In place value, each place is 10 times the value of the place to its right, including after the decimal point.	fraction is the bottom number and shows into how many equal parts the item or number is divided. • Unit fractions have a numerator of 1. • Non-unit fractions have a numerator greater than 1. • Equivalence means of equal (the same) value. • A tenth is 1 divided by 10. • A hundredth is 1 divided by 100. • A thousandth is 1 divided by 1000. • A proper fraction has a numerator less than the denominator. • An improper fraction has a numerator equal to or greater than the denominator. • A mixed number is the combination of a whole number and a proper fraction. • For two or more digit numbers, if the number to the right of the place value number you are rounding is equal to or greater than 5, round up. • If the number to the right of the place value number you are rounding is less than 5, round down. • In place value, each place is 10 times the value of the place to its right, including after the decimal point. • % is the symbol for percent and percent is the number of parts per hundred.	multiplying a number by an integer. • Common multiples are multiples of two or more numbers. Multiplying a numerator and denominator by a common multiple can give fractions in the same denomination (same denominator). • Equivalent fractions have different numerators and denominators but are equal in value. • Addition and subtraction can be carried out once the numerator and denominators have been multiplied or divided to get the same denominator. The answer is then found by adding or subtracting the numerator. • To multiply fractions, multiply the numerators together and then multiply the denominators together. Write the answer in its simplest form. • To divide fractions by whole numbers, multiply the denominator by the whole number. • A fraction is a representation of the division of the numerator by the denominator. Fractions have decimal and percentage equivalents. They also form part of mixed numbers. • In place value, each place is 10 times the value of the place to its right. • A simple fraction has a whole number for a numerator and denominator.

Geometry - Properties of Shape						
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
NC Aims	• Recognise and name common 2-D shapes (for example, rectangles (including squares), circles and triangles). • Recognise and name common 3-D shapes (for example, cuboids (including cubes), pyramids and spheres).	• Identify and describe the properties of 2-D shapes, including the number of sides and line of symmetry in a vertical line. • Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces. • Identify 2-D shapes on the surface of 3-D shapes (for example, a circle on a cylinder and a triangle on a pyramid). • Compare and sort common 2-D and 3-D shapes and everyday objects.	• Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them. • Recognise angles as a property of shape or a description of a turn. • Identify right angles, recognise that two right angles make a half-turn, three right angles make three quarters of a turn and four complete a turn; identify whether angles are greater than or less than a right angle.	• Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. • Identify acute and obtuse angles and compare and order angles up to two right angles by size. • Identify lines of symmetry in 2-D shapes presented in different orientations. • Complete a simple symmetric figure with respect to a specific line of symmetry.	• Identify 3-D shapes, including cubes and other cuboids, from 2-D representations. • Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. • Draw given angles, and measure them in degrees. • Identify angles at a point and one whole turn (total 360^o) • Identify angles at a point on a straight line and ½ a turn (total 180^o) • Identify other multiples of 90^o. • Use the properties of rectangles to deduce related facts and find missing lengths and angles. • Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.	• Draw 2-D shapes using given dimensions and angles. • Recognise, describe and build simple 3-D shapes, including making nets. • Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons. • Illustrate and name parts of circles, including radius, diameter, and circumference and know that the diameter is twice the radius. • Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.
Coverage	• Recognising solids • Recognising shapes • Grouping shapes • Making patterns	• Identifying sides • Identifying vertices • Identifying lines of symmetry • Making figures • Sorting shapes • Drawing shapes • Making patterns • Describing patterns • Moving shapes • Turning shapes • Recognising three dimensional shapes • Describing three dimensional shapes • Grouping three dimensional shapes	• Making angles • Making angles • Finding angles in shapes • Finding right angles • Comparing angles • Making turns • Identifying perpendicular lines • Identifying parallel lines • Finding vertical and horizontal lines • Describing two-dimensional shapes • Drawing two-dimensional shapes • Making three-dimensional shapes	• Knowing types of angles • Comparing angles • Classifying triangles • Classifying quadrilaterals • Identifying symmetrical figures • Drawing lines of symmetry • Completing symmetrical figures • Making symmetrical figures • Completing symmetrical figures • Sorting shapes	• Knowing types of angles • Measuring angles • Investigating angles on a line • Investigating angles at a point • Drawing angles • Drawing lines and angles • Describing squares and rectangles • Investigating angles in squares and rectangles • Solving problems involving angles in rectangles • Solving problems involving angles • Investigating regular polygons	• Investigating vertically opposite angles • Solving problems involving angles • Investigating angles in triangles • Investigating angles in quadrilaterals • Solving problems involving angles in triangles and quadrilaterals • Naming parts of a circle • Solving problems involving angles in a circle • Drawing quadrilaterals • Drawing triangles • Drawing nets of three-dimensional shapes

		• Forming three dimensional shapes • Making patterns	• Describing three-dimensional shapes			
Knowledge	• These are common 2-D shapes: squares, rectangles, circles, triangles, pentagons, hexagons and octagons. • Common 3-D shapes include cuboids, cubes, spheres, cones, cylinders and pyramids.	• A two-dimensional (2-D) shape only has two measurements. • These are common 2-D shapes: squares, rectangles, circles, triangles, pentagons, hexagons and octagons. • A shape has symmetry in a vertical line if a line can be drawn down the middle of it and the left side is a mirror image of the right. • Squares and rectangles have four sides and a vertical line of symmetry. • Circles have one side and a vertical line of symmetry. Triangles have three sides and may have a vertical line of symmetry. • A vertex of a 3-D shape is a corner where lines meet. • The plural of vertex is vertices. • An edge of a 3-D shape joins two vertices. • The flat surface of a 3-D shape is called a face. • A three-dimensional (3-D) shape has three measurements and can be held. • Common 3-D shapes include cuboids, cubes, spheres, cones, cylinders and pyramids. • The flat surface of a 3-D shape is called a face. • The faces of a cuboid can be rectangles and squares. • The faces on a cube are squares. • Two of the faces on a cylinder are circles.	• A two-dimensional shape only has two measurements. • A three-dimensional shape has three measurements and can be held. • Common 3-D shapes include cuboids, cubes, spheres, cones, cylinders and pyramids. • A vertex of a 3-D shape is a corner where lines meet. • The plural of vertex is vertices. • An edge of a 3-D shape joins two vertices. • The flat surface of a 3-D shape is called a face. • An angle is the amount of turn, or space, between two lines around their vertex and is measured in degrees. • A right angle is a quarter-turn. • Two right angles make a half-turn. • Three right angles make three-quarters of a turn. • Four right angles make a complete turn. • Horizontal lines go across. • Vertical lines go up and down. • Perpendicular lines are lines that form a right angle where they meet or cross. • Parallel lines never meet or cross. They are always the same distance apart.	• A quadrilateral is a four-sided shaped (quad is derived from the Latin word meaning four and lateral is related to sides). • A square has four equal sides, four right angles and four lines of symmetry. • A rectangle or oblong has two sets of two equal sides, four right angles and four lines of symmetry. • A parallelogram has two sets of two equal sides, two sets of two equal angles and usually no lines of symmetry. • A trapezium has at least two parallel sides and can have pairs of equal angles and a line of symmetry. • A triangle is a three-sided shape (tri is derived from Latin and Greek meaning three). • An equilateral triangle has three equal sides and angles and three lines of symmetry. • An isosceles triangle has two equal sides and angles. • A scalene triangle has no equal sides and no equal angles. • A right-angled triangle has a 90^o. • The angles in any triangle add up to 180^o. • An acute angle is less than a right angle (90^o). • An obtuse angle is greater than a right angle (90^o) but less than a straight angle (180^o). • A shape or object is symmetrical if you can draw a straight line vertically, horizontally or diagonally	• An angle is the amount of turn, or space, between two lines around their vertex and is measured in degrees. • An acute angle is less than a right angle (90^o). • An obtuse angle is greater than a right angle (90^o) but less than a straight angle (180^o). • A reflex angle is greater than a straight angle (180^o) but less than 360^o (a complete rotation). • A polygon (a 2-D shape formed with straight lines) is regular when all sides and angles are equal. • A polygon is irregular if it has different length sides and/or angles.	• The conventional marking for parallel lines are > in the centre of the pair of two parallel lines. >> is used for a second pair of parallel lines within a shape. • Arcs are used to represent angles and a square is used to represent a right angle (90^o). • Some 3-D shapes, like cubes and pyramids, can be opened or unfolded along their edges to create a flat shape. The unfolded shape is called the net of the solid. • A quadrilateral is a four sided shape (quad is derived from a Latin word meaning four and lateral is related to sides). • A square has four equal sides, four right angles and four lines of symmetry. • A parallelogram has two sets of two equal sides, two sets of two equal angles and usually no lines of symmetry. • A rhombus has four equal sides, two sets of two equal angles and two lines of symmetry. • A trapezium has at least two parallel sides and can have pairs of equal angles and a line of symmetry. • A triangle is a three sided shape (tri is derived from Latin and Greek meaning three). • An equilateral triangle has three equal sides and angles and three lines of symmetry. • An isosceles triangle has two equal sides and angles. • A scalene triangle has no equal sides and no equal angles.

		• One of the faces on a pyramid may be a circle, square or a rectangle.		down the middle of it and the two sides are a mirror image of each other. • The straight, often imaginary, lines are called lines or axes of symmetry.		• A right-angled triangle has a 90^o angle. • The angles in any triangle add up to 180^o. • A circle is a 2-D shape. • A circle's perimeter is called circumference. • Diameter of a circle is the straight line segment that passes through the centre. • Radius is a straight line from the centre to the circumference of a circle and is half the diameter. • Angle is the amount of turn, or space between two lines around the vertex and is measured in degrees (^{o}). • An acute angle is less than a right angle. • An obtuse angle is greater than a right angle but less than a straight angle (180^o). • A reflex angle is greater than a straight line angle but less than 360^o (a complete rotation). • Vertically opposite angles are the angles opposite each other when two lines cross and are always equal. • The angles in a quadrilateral or polygon add up to 360^o.
Geometry – Position and Direction						
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
NC Aims	• Describe position, direction and movement, including whole, half, quarter and three-quarter turns.	• Order and arrange combinations of mathematical objects in patterns and sequences. • Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns	• draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them • recognise angles as a property of shape or a description of a turn • identify right angles,	• Describe positions on a 2-D grid as coordinates in the first quadrant. • Describe movements between positions as translations of a given unit to the left/right and up/down. • Plot specified points and draw sides to complete a given polygon.	• Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.	• Describe positions on the full coordinate grid (all four quadrants). • Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.

		(clockwise and anti-clockwise).	recognise that 2 right angles make a half-turn, 3 make three-quarters of a turn and 4 a complete turn; identify whether angles are greater than or less than a right angle • identify horizontal and vertical lines and pairs of perpendicular and parallel lines			
Coverage	• Naming positions • Naming positions in queues • Naming left and right positions • Describing positions • Describing movements • Making turns	• Identifying sides • Identifying vertices • Identifying lines of symmetry • Making figures • Sorting shapes • Drawing shapes • Making patterns • Describing patterns • Moving shapes • Turning shapes • Recognising three dimensional shapes • Describing three dimensional shapes • Describing three dimensional shapes • Grouping three dimensional shapes • Forming three dimensional shapes • Making patterns		• Describing position • Plotting points • Describing movements	• Naming and plotting points • Describing translations • Describing movements • Successive reflections	• Showing negative numbers • Describing position • Drawing polygons on a coordinate grid • Describing translations • Describing reflections • Describing movements • Using algebra to describe movements
Knowledge	• Position, direction and movement can be described using these words: top, middle, bottom, on top of, in front of, above, between, around, near, close, far, up, down, turn, forwards, backwards, inside, outside, left and right.	• Position, directly and movement, including rotation, can be described using these words: top, middle, bottom, on top of, in front of, above, between, around, near, close, far, up, down, turn, forwards, backwards, inside, outside, left and right.	• symmetrical and non-symmetrical polygons and polyhedra. = • describe the properties of 2-D and 3-D shapes using accurate language, including lengths of lines and acute and obtuse for angles greater or lesser than a right angle • Pupils connect decimals and	• Coordinates are numbers or letters that determine the position of a point or shape in a grid, graph or map. • The x-axis is horizontal from or through zero and the y-axis is vertical from or through zero. • When reading coordinates or using them to determine a point, x is read before y.	• A translation moves a shape up, down or from side to side, without reflecting it or changing its shape. • A reflection is the image of a shape if it was looked at in a mirror. • Shapes that have been translated or reflected are the same size as the original shape.	• Coordinates are numbers or letters that determine the position of a point or shape in a grid, graph or map. • The x-axis is horizontal from or through zero and the y-axis is vertical from or through zero. • When reading coordinates or using them to determine a point, x is read before y.

		• A half is one of two equal parts of a whole object, shape, quantity or movement. • A quarter is one of four equal parts of a whole object, shape, quantity or movement. • Clockwise is the movement in the direction of the rotation of the hands of a clock. • The opposite direction is anti-clockwise.	rounding to drawing and measuring straight lines in centimetres, in a variety of contexts.	• A translation moves a shape up, down or from side to side, without reflecting it or changing its shape. • A polygon is any 2-D shape formed with straight lines.		• A full coordinate grid has four quadrants (first, second, third and fourth). • The first quadrant is the top right, second is top left, third is bottom left and fourth is bottom right.
Measurement						
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
NC Aims	• Compare, describe and solve practical problems for: lengths and heights (for example, long/short, longer/shorter, tall/short, double/half); mass/weight (for example, heavy/light, heavier than, lighter than); capacity and volume (for example: full/empty, more than, less than, half, half full, quarter); time (for example, quicker, slower, earlier, later). • Measure and begin to record the following: lengths and heights; mass/weight; capacity and volume; time (hours, minutes, seconds). • Recognise and know the value of different	• Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm; mass (kg/g); temperature (^{o}C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels. • Compare and order lengths, mass, volume/capacity and record the results using <, > and =. • Recognize and use symbols for pounds (£) and pence (p); combine amounts to make a particular value. • Find different combinations of coins that	• Measure, compare, add, and subtract: lengths (m/cm/mm); mass (kg/g); volume/ capacity (l/ml). • Measure the [perimeter of simple 2-D shapes. • Add and subtract amounts of money to give change, using both £ and p in practical contexts. • Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks. • Estimate and read time with an increasing accuracy to the nearest minute; record and compare time in terms of seconds, minute and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and	• Convert between different units of measure (for example, kilometre to metre; hour to minute). • Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. • Find the area of rectilinear shapes by counting squares. • Estimate, compare and calculate different measures, including money in pounds and pence. • Read, write and convert time between analogue and digital 12- and 24-hour clocks. • Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	• Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millimetre). • Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. • Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres. • Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and	• Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate. • Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places. • Convert between miles and kilometres. • Recognise that shapes with the same areas can have different perimeters and vice versa. • Recognise when it is possible to use formulae for area and

	denominations of coins and notes. • Sequence events in chronological order using language (for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening). • Recognise and use language relating to dates, including days of the week, weeks, months and years. • Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.	equal the same amounts of money. • Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change. • Compare and sequence intervals of time. • Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times. • Know the number of minutes in an hour and the number of hours in a day.	midnight. • Know the number of seconds in a minute and the number of days in each month, year and leap year. • Compare durations of events (for example to calculate the time taken by particular events or tasks).		estimate the area of irregular shapes. • Estimate volume (for example, using 1 cm3 blocks to build cuboids (including cubes)) and capacity (for example, using water). • Solve problems involving converting between units of time. • Use all four operations to solve problems involving measure (for example, length, mass, volume, money) using decimal notation, including scaling.	volume of shapes. • Calculate the area of parallelograms and triangles. • Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units (for example, mm3 and km3).
Coverage	• Comparing height and length • Measuring length using things • Measuring height and length using body parts • Measuring height and length using a ruler • Telling time to the hour • Telling time to the half hour • Using next, before and after • Estimating duration of time • Comparing time • Using a calendar • Recognising coins • Recognising notes • Comparing volume and capacity • Finding volume and capacity • Describing volume using half and a quarter • Comparing mass • Finding mass	• Measuring length in meters • Measuring length in centimetres • Comparing length in meters • Comparing length in centimetres • Comparing the length of lines • Solving word problems • Measuring mass in kilograms • Measuring mass in grams • Comparing masses of two objects • Comparing the mass of three objects • Solving word problems • Solving more word problems • reading temperature • estimating temperature • writing amounts of money • counting money • showing equal amounts of money • exchanging money • comparing amounts of money	• writing length in metres and centimetres • writing length in centimetres • writing length in metres • writing length in kilometres and metres • comparing length • solving word problems • reading weighing scales • solving word problems • measuring volume in millilitres • measuring volume in millilitres and litres • measuring capacity in millilitres and litres • writing volume in litres and millilitres • writing capacity in litres and millilitres • solving word problems • naming amounts of money • adding money • subtracting money • calculating change • solving word problems • telling the time • measuring and comparing time in seconds	• Telling time on a 24-hour clock • Changing time in minutes to seconds • Changing time in hours to minutes • Solving problems on duration of time • Changing years to months and weeks to days • Solving word problems • Writing amounts of money • Comparing amounts of money • Rounding amounts of money • Solving problems involving money • Solving problems involving money • Estimating amount of money • Measuring mass • Converting units of mass • Measuring volume • Converting units of volume • Measuring length • Converting units of length • Measuring perimeters in different units • Solving problems involving	• Solving word problems • Solving word problems • Solving word problems • Converting units of length • Converting units of mass • Converting units of time • Telling the temperature • Finding the perimeter • Using scale diagrams to find the perimeter • Measuring the area • Understanding the volume of solids • Finding the volume of solids • Finding the capacity of rectangular boxes • Finding the capacity of rectangular boxes • Converting units of volume • Solving word problems involving volume	• Converting units of length • Converting units of mass • Converting units of volume • Converting units of time • Solving word problems • Finding the area and perimeter of rectangles • Finding the area of parallelograms • Finding the area of triangles • Finding the area of parallelograms • Finding the volume of cubes and cuboids • Solving problems involving the volume of solids

		• calculating total amount • calculating change • solving word problems • #telling and writing time to 5 minutes • telling and writing time • sequencing events • drawing clock hands • finding durations of time • finding ending times • finding starting times • comparing time • comparing volume • measuring volume in litres • measuring volume in millilitres • solving word problems	• measuring time in seconds • measuring time in hours • measuring time in minutes • changing minutes to seconds • changing seconds to minutes • finding number of days **Perimeter of figures** • Measuring total length around a shape • Measuring perimeter • Calculating perimeter	scale reading • Measuring the surface that an object covers • Measuring area		
Knowledge	• Length is a measure of how long something is from end to end. • Height is a measure of how high something is from head to foot or top to base. • Mass or weight is the measure of the amount of something and how heavy it is. • Capacity is how much a container can hold. • Volume is the space that water takes up in a container. • Time can be described using these words: quicker, slower, earlier and later. • Length is a measure of how long something is from end to end. • Height is a measure of how high something is from head to foot or top to base. • Mass or weight is the measure of the amount of something and how heavy it is. • Capacity is how much a	• Estimate means to have a sensible guess. Estimating is calculating the approximate amount, size or value of something. • A scale is a set of numbers on measuring equipment that is used to show the value or size of something. • Length, width and height can be measured in metres or centimetres. • There are 100cm in 1m. • Mass can be measured in kilograms or grams. • There are 1000g in 1kg. • Temperatures can be measured in degrees Celsius. • 0^oC is the freezing point of water and 100^oC is the boiling point of water. • Capacity can be measured in litres or millilitres. • There are 1000ml in 1L. • Length is a measure of how long something is from end to end. • Height is a measure of how high something is from head to foot or top to base.	• Length, width and height can be measured in metres and centimetres. • There are 100cm in 1m. • Mass can be measured in kilograms or grams. • There are 1000g in 1kg. • Temperatures can be measured in Celsius. • 0^oC is the freezing point of water and 100^oC is the boiling point of water. • Capacity can be measured in litres and millilitres. • There are 1000ml in 1l. • The perimeter is the total distance around the edge of a shape. • Money can be measured in pounds and pence. • There are 100p in £1. • In Roman numerals I=1, II=2, III=3, IV=4, V=5, VI=6, VII=7, VIII=8, IX=9, X=10, XI=11 and XII=12. • O'clock is used after a number from 1 to 12 to give the time when it is exactly that hour. • A time is in the morning if it is followed by 'am' and in the afternoon if it is	• There are 100cm in 1m. • There are 1000m in 1km. • There are 1000g in 1kg. • There are 1000ml in 1l. • Kilo is derived from a Greek word meaning thousand. • Perimeter is the total distance around the edge of a shape. • Area is the amount of space inside the boundary of a 2-D object or face of a 3-D object. • There are 60 minutes in an hour and 60 seconds in a minute. • There are 7 days in a week, between 28 and 31 days in a month, 365 days in a year and 366 in a leap year, which occurs every fourth year.	• There are 10mm in 1cm, 100cm in 1m and 1000m in 1km. • There are 1000g in 1kg. • There are 1000ml in 1l. • Kilo is derived from a Greek word meaning thousand. • Imperial units of measurement were used in Britain from the 1820's to the 1960's when the metric system, using multiples of 10, was adopted. • 1 inch = 2.5 cm. • 1 foot = 12 inches = 30cm (approximately). • 1 yard = 3 feet = 914cm (approximately 1m). • 1 mile = 1760 yards = 1.6km. • 1 ounce = 28g. • 1 pound = 16 ounces = 453g (approximately ½ kg). • 1 stone = 14 pounds = 6.4kg. • 1 pint =568ml (approximately ½ l). • 1 gallon = 8 pints = 4.5l. • Perimeter is the total distance around the edge of a shape. • A composite shape is made of two or more rectilinear figures (polygons with	• There are 10mm in 1cm, 100cm in 1m and 1000m in 1km. • There are 1000g in 1kg. • There are 1000ml in 1l. • Kilo is derived from a Greek work meaning thousand. • There are 60 minutes in an hour and 60 seconds in a minute. • There are 7 days in a week, between 28 and 31 days in a month, 365 days in a year and 366 in a leap year, which occurs every fourth year. • 1 mile = 1760 yards = 1.6km. • A = H x W is the formula for calculating the area of a rectangle, where A = area, H = height and W = width. • V = L x W x H is the formula for calculating the volume of a cuboid, where V = volume, L = length, W = width and H = height. • The area of a triangle is found by multiplying its height by the width and then dividing by 2. • The area of a parallelogram is found by multiplying the base by the height.

	container can hold. • Volume is the space that water takes up in a container. • Time can be measured using hours, minutes and seconds. • Events can be sequenced using these words: before, after, now, next, first, today, yesterday, tomorrow, morning, afternoon, evening, earlier and later. • The past refers to events that have already happened. • The present refers to events that are happening now. • The future refers to events that haven't happened yet. • There are seven days in a week: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday and Sunday. • There are twelve months in a year: January, February, March, April, May, June, July, August, September, October, November and December. • There are four seasons in a year: Spring, Summer, Autumn and Winter. • The hour hand is the shorter hand on a clock and the minute hand is the longer hand. • On an analogue clock, the minute hand points to 12 when it is an o'clock time and points to 6 when it is half past the hour.	• Mass or weight is the measure of the amount of something and how heavy it is. • Capacity is how much a container can hold. • Volume is the measure of the space something takes up. • Equals shows that things on both sides of it have or should have the same value. • Less than shows that the value to the left of it is lower than the value to the right of it. • Greater than shows that the value to the left of it is higher than the value to the right of it. • Money can be measured in pounds and pence. • There are 100p in £1. • Change is the money returned to someone when they have paid for an item with an amount that is greater than the price. • An analogue clock face can be divided into 60 minutes. It often shows 5 minute intervals using the numbers from 1 to 12 on the face. • The hour hand is the shorter hand on a clock and the minute hand is the longer hand on a clock. • Clockwise is the movement around a clock from left to right and hands move in a clockwise direction. • On an analogue clock, the minute hand points to 12 when it is an o'clock time and points to 6 when it is	followed by 'pm'. • Noon is 12pm and midnight is 12am. • There are 60 seconds in a minute, 60 minutes in an hour and 24 hours in a day. • There are 365 days in a year and 366 in a leap year which occurs every fourth year. • The months of the year are January (31 days), February (28 or 29 days), March (31 days), April (30 days), May (31 days), June (30 days), July (31 days), August (31 days), September (30 days), October (31 days), November (30 days) and December (31 days). • Duration is the length of time something lasts.		interior angles of 90^o or 270^o, including squares). • The area of a rectangle (including squares) is calculated by multiplying its height by its width. • Standard units of area are square centimetres or centimetres squared (cm^2) and square metres or metres squared (m^2). • Capacity is a measure of how much something can hold. • Volume is the measure of the space that an object or liquid takes up. • There are 60 minutes in an hour and 60 seconds in a minute. • There are 7 days in a week, between 28 and 31 days in a month, 365 days in a year and 366 in a leap year, which occurs every fourth year.	• Volume of cubes and cuboids are calculated by multiplying the length, width and height. • Standard units of volume are cubic centimetres or centimetres cubed and cubic metres or metres cubed.

		half past the hour. • The minute hand points towards the 3 at quarter past and 9 at quarter to the hour. • There are 60 seconds in a minute, 60 minutes in an hour and 24 hours in a day.				
Statistics						
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
NC Aims		• Interpret and construct simple pictograms, tally charts, block diagrams and simple tables. • Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.	• Interpret and present data using bar charts, pictograms and tables. • Solve one-step and two-step questions (for example, 'How many more?' and 'How many fewer?' using information presented in scaled bar charts and pictograms and tables.	• Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. • Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	• Solve comparison, sum and difference problems using information presented in a line graph. • Complete, read and interpret information in tables, including timetables.	• Interpret and construct pie charts and line graphs and use these to solve problems. • Calculate and interpret the mean as an average.
Coverage		• Reading picture graphs	• Drawing picture graphs • Drawing bar graphs • Reading bar graphs	• Drawing and reading picture graphs and bar graphs • Drawing and reading bar graphs	• Reading tables • Reading line graphs	• Understanding averages • Calculating the mean • Solving problems involving the mean • Showing information on graphs • Reading pie charts • Reading line graphs • Converting miles into kilometres • Reading line graphs
Knowledge		• Data is facts and figures. • A table in maths is a way to set out data so it is easy to record and see. • Tally marks are a quick way of keeping track of numbers in groups of five. • A pictogram uses pictures to represent data.	• Data is facts and figures. • A table in maths is a way to set out data so it is easy to record and see. • Tally marks are a quick way of keeping track of numbers in groups of five. • A pictogram uses pictures to represent data. • A bar chart represents data	• Discrete data can only be shown in integers, for example, the number of children in a class. • Continuous data can take any value, including decimals.	• Solve one step problems using different types of graphs	• Mean is a type of average, it is the total of the numbers divided by how many numbers there are.

			using bars / lines.			
Ratio and Proportion						
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
NC Aims						• Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts. • Solve problems involving the calculation of percentages (for example, of measures, and such as 15% of 360) and the use of percentages for comparison. • Solve problems involving similar shapes where the scale factor is known or can be found. • Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.
Coverage						• Comparing quantities • Comparing numbers • Solving word problems
Knowledge						• Ratio compares quantities at different scales.
Algebra						
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
NC Aims						• Use simple formulae • Generate and describe linear number sequences. • Express missing number problems algebraically. • Find pairs of numbers that satisfy an equation with two unknowns. • Enumerate possibilities of combinations of two variables.
Coverage						• Describing a pattern • Writing algebraic expressions • Writing and evaluating algebraic expressions

						• Writing formulae • Using formulae • Solving equations
Knowledge						• Numbers can be represented using letters • Patterns can be described using letters and numbers • Formula are number sentences